

CLAIM AMENDMENTS

A¹ 1. (currently amended) An optical device package comprising:
a substrate¹² having mounted on its one side optical devices¹³ and having formed in said one side positioning parts¹⁵ for defining the positions of optical axes of said optical devices;
a case¹¹ with said substrate housed therein;
an optical connector ferrules^{11a} ~~mounted~~ fitted in windows formed in two opposite side walls of said case;
flexible optical waveguides^{17a} held at one end in optical fiber receiving holes ~~made~~ formed in said optical connector ferrules and having the other ends extended into said case and positioned in said positioning parts to provide optical coupling between said flexible optical waveguides and said optical devices; and
a ferrule couplers⁵² provided on the end faces⁵⁰ of said optical connector ferrules externally exposed out of said case, for optically coupling optical fibers held ~~in another~~ by externally connecting optical connector ferrules to said flexible optical waveguides held by the corresponding optical connector ferrules.

2. (original) The optical device package of claim 1, wherein said substrate is a semiconductor substrate and said positioning parts are V grooves cut in said semiconductor substrate in parallel to the optical axes of said optical devices.

3. (original) The optical device package of claim 1, wherein said flexible optical waveguides are each formed by a graded index optical fiber that focuses light emitted therefrom.

4. (original) The optical device package of claim 1, wherein said flexible optical waveguides are each formed by a TEC optical fiber that focuses light emitted therefrom.

5. (original) The optical device package of claim 1, wherein said ferrule coupler comprises pins projecting from one of said optical connector ferrules and pin receiving holes made in the other optical connector ferrule.

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6. (original) The optical device package of claim 1, wherein misalignments between the optical axes of said optical devices and the axes of said optical fiber receiving holes of said optical connector ferrule and their misorientations are accommodated by deforming said flexible optical waveguides.

7. (new) An optical device package comprising:

a substrate having mounted on its one side optical devices and having formed in said one side positioning parts for defining the positions of optical axes of said optical devices, each said optical device having at least two ports for receiving/delivering a light beam on different sides thereof, said positioning parts being formed in plural groups therewith, and each said positioning part in each group being provided to correspond to each said ports of each said optical devices;

a case with said substrate housed therein;

at least two optical connector ferrules fitted in windows formed in different sidewalls of said case;

flexible optical waveguides having one ends held in optical fiber receiving holes formed in said optical connector ferrules and the other ends extended into said case and positioned in said positioning parts so that optical axes of said flexible optical waveguides are aligned with those of the corresponding ports of said optical devices; and

ferrule couplers provided on end faces of said optical connector ferrules externally exposed out of the sidewalls of said case, for optically coupling externally connecting optical fibers held in externally connecting optical connector ferrules to said flexible optical waveguides held by the corresponding optical connector ferrules.

8. (new) An optical device package comprising:

a substrate having mounted on its one side optical devices and having formed in said one side positioning parts for defining the positions of optical axes of said optical devices, each said optical device having plural pairs of ports for externally receiving/delivering light beams on both sides thereof opposite to each other, said positioning parts being formed in plural pairs therewith, and each said positioning part in each pair being provided to correspond to each said ports of each pair of each said optical device;

a case with said substrate housed therein;

two optical connector ferrules fitted in windows formed in two opposite sidewalls of said case;

flexible optical waveguides having one ends held in optical fiber receiving holes formed in said optical two connector ferrules and extended at the other ends into said case and positioned in said positioning parts to define positions of optical axes of said flexible optical waveguides in alignment with the corresponding ports of said optical devices; and

two ferrule couplers provided on end faces of said two optical connector ferrules externally exposed out of said case, for optically coupling externally connecting optical fibers held in two externally connecting optical connector ferrules to said flexible optical waveguides held by the corresponding optical connector ferrules,

whereby any pair of the optical fibers held in said two externally connecting optical connector ferrules are coupled together by means of the flexible optical waveguides without adjusting offset in alignment of the axes of the pair of the optical fibers.

9. (new) The optical device package according to claim 8, wherein
said externally connecting optical fibers are single-mode optical fibers, and
the externally connecting optical connector ferrule and the optical connector ferrule are bonded together,

whereby the optical devices housed in the case can be accessed only by connecting external device to the single-mode optical fiber led from the optical device package.

10. (new) The optical device package according to claim 9, wherein
said optical devices are optical switches,
whereby the optical device package acts as an optical switch package.

11. (new) The optical device package according to claim 8, wherein
the two ports in each pair for each said optical device are provided on opposite sides of the optical device, and
the other ends of the flexible optical waveguides held in the two ports in each pair are oppositely provided to each other so that they are optically coupled together when the optical device positioned therebetween is offset.

12. (new) The optical device package according to claim 11, wherein
said externally connecting optical fibers are single-mode optical fibers, and
the externally connecting optical connector ferrule and the optical connector ferrule are
bonded together,
whereby the optical devices housed in the case can be accessed only by connecting
external device to the single-mode optical fiber led from the optical device package.

13. (new) The optical device package according to claim 12, wherein
said optical devices are optical switches,
whereby the optical device package acts as an optical switch package.

14. (new) The optical device package of claim 7, wherein said substrate is a semiconductor
substrate and said positioning parts are V grooves cut in said semiconductor substrate in parallel to
the optical axes of said optical devices.

15. (new) The optical device package of claim 7, wherein said flexible optical waveguides
are each formed by a graded index optical fiber that focuses light emitted therefrom.

16. (new) The optical device package of claim 7, wherein said flexible optical waveguides
are each formed by a TEC optical fiber that focuses light emitted therefrom.

17. (new) The optical device package of claim 7, wherein said ferrule coupler comprises
pins projecting from one of said optical connector ferrules and pin receiving holes made in the other
optical connector ferrule.

18. (new) The optical device package of claim 7, wherein misalignments between the optical
axes of said optical devices and the axes of said optical fiber receiving holes of said optical
connector ferrule and their misorientations are accommodated by deforming said flexible optical
waveguides.